

Amendments

In the Claims:

Claim 1 (Currently amended): A method of screening for compounds which affect mRNA stability, comprising the steps of:

- (a) providing a DNA expression system which, in the absence of the test compound, is capable of expressing a protein having a detectable signal, wherein mRNA which codes for the protein and which is transcribed from the expression system comprises at least one copy of a mRNA instability sequence;
- (b) contacting the DNA expression system with at least one test compound;
- (c) measuring the detectable signal in the presence of the test compound; and
- (d) comparing the measured detectable signal with a control;

wherein a decrease in the measured detectable signal compared to the control indicates a compound that decreases mRNA stability and an increase in the measured detectable signal compared to the control indicates a compound that increases mRNA stability, and wherein said DNA expression system comprises: 1) an expression cassette consisting of one or more genes encoding said protein and 5' and 3' UTR sequences comprising operably-linked expression control elements; and 2) an instability region consisting of at least 20-100 nucleotides of the 3' UTR of a gene sequence which confers instability to a mRNA, wherein said instability region is inserted into the 3' UTR of said expression cassette, and wherein said instability region is heterologous to the 3' UTR sequence.

Claim 2 (Canceled).

Claim 3 (Currently amended): A method for comparing the extent of mRNA degradation induced by two or more compounds, comprising the steps of:

- (a) providing a DNA expression system, which in the absence of a test compound is capable of expressing a protein having a detectable signal, wherein mRNA which codes for the protein and which is transcribed from the expression system, comprises at least one copy of a mRNA instability sequence;
- (b) separately contacting the DNA expression system with two or more test compounds;
- (c) measuring the detectable signal in the presence of each test compound; and
- (d) comparing the measured detectable signals;

wherein the compound whose presence results in a lower measured detectable signal has induced a greater extent of mRNA degradation, and wherein said DNA expression system comprises: 1) an expression cassette consisting of one or more genes encoding said protein and 5' and 3' UTR sequences comprising operably-linked expression control elements; and 2) an instability region consisting of at least 20-100 nucleotides of the 3' UTR of a gene sequence which confers instability to a mRNA, wherein said instability region is inserted into the 3' UTR of said expression cassette, and wherein said instability is heterologous to the 3' UTR sequence.

Claim 4 (Currently amended): A reporter gene DNA expression system comprising: 1) an expression cassette consisting of one or more genes encoding a protein having a detectable signal and 5' and 3' UTR sequences comprising operably-linked expression control elements; and 2) an instability region consisting of at least 20-100 nucleotides of the 3' UTR of a gene sequence which confers instability to a mRNA, wherein said instability region is inserted into the 3' UTR of said expression cassette, and wherein said instability region is heterologous to the 3' UTR sequence.

Claim 5 (Previously presented): A stably transfected cell line comprising the reporter gene DNA expression system of claim 4.

Claim 6 (Previously presented): An assay system for screening for compounds which destabilise mRNA comprising:

- (a) the reporter gene DNA expression system of claim 4; and
- (b) a control DNA expression system comprising said gene coding for expression of a protein having a detectable signal, wherein the gene comprises DNA coding for the amino acid sequence of the protein together with 5' and 3' UTR sequences comprising operably-linked expression control elements, but lacking any functional mRNA instability sequences.

Claim 7 (Previously presented): The assay system according to claim 6, wherein said reporter gene expression system and said control DNA expression system are provided in a stably transfected cell line.

Claim 8 (Previously presented): A stably transfected cell line comprising:

- (a) the reporter gene DNA expression system of claim 4; and
- (b) a control DNA expression system comprising a gene coding for expression of a second protein having a detectable signal, wherein the gene comprises DNA coding for the amino acid sequence of the protein together with 5' and 3' UTR sequences comprising operably-linked expression control elements, but lacking any functional mRNA instability sequences.

Claim 9 (Previously presented): An assay system for screening for compounds that destabilize mRNA comprising the stably transfected cell line according to claim 8.

Claims 10-14 (Canceled).

Claim 15 (Previously presented): The method according to claim 1, wherein said compounds are being screened for inducing mRNA degradation, and wherein a decrease in the measured detectable signal compared to said control indicates a compound that induces mRNA degradation.

Claim 16 (Currently amended): A reporter gene DNA expression system as in claim 4, wherein said instability region is from genes coding for cytokines, chemokines, nuclear transcription factors, protooncogenes, immediate early genes, cell cycle controlling genes, oxygenases, ~~and~~ or genes involved in and controlling of apoptosis.

Claim 17 (Currently amended). A reporter gene DNA expression system as in claim 4, wherein said instability region is from genes coding for GM-CSF, *c-fos*, *c-myc*, *c-jun*, *krox-20*, *nur-77*, *zif268*, bcl-2, β -IFN, uPA, IL-1, IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-8, IL-9, IL-10, IL-11, IL-13, TNF- α , MCP-1, syn1, β 2-AR, E-selectin, VCAM-1, ICAM-1, Gro- α , Gro- β , MMP-1, MMP-2, collagenases, P-glycoproteins (MDR), MRPs, P γ h1 (pf mdr), COXII, ~~and~~ or MIP-2 α .